## REMARKS

The Applicants wish to thank the Examiner for his review of the present application. In the present response, Applicants have amended claims 12, 89 and 173. Claims 1-6, 9-10, 14-55, 106-115, 131-172, and 174-184 have been withdrawn and claims 7-8, 11, 56-88, and 100 have been cancelled. Accordingly, claims 12-13, 89-99, 101-105, 116-130 and 173 are under consideration in the application. No new matter has been added.

## 35 U.S.C. §102

The office action rejects claims 12, 89-91, 93-98-103, 118-119, 124-130 and 173 under 35 U.S.C. 102(e) as being anticipated by U.S. Patent Number 6,442,287 (Jiang et al., hereinafter "Jiang").

Amended claim 12 defines, in relevant part, a method for analyzing bone comprising obtaining image data of an anatomical structure, locating a region of interest in the image data, extracting a trabecular pattern from the region of interest, generating a data structure representing the trabecular pattern and deriving quantitative information from the data structure. Claim 12 has been amended to further require *combining at least two parameters from the group consisting of total area, trabecular perimeter, node count (N), segment count (S), node-to-free-end segment count (NF), and mean distance transform values for each connected skeleton.*

Although Applicants believe that the disclosure in Jiang is different than the process disclosed and previously claimed, Jiang does not teach the method of the currently amended claim. Rather, Jiang selects regions of interest, performs a background correction within the region of interest, performs a fitting technique, and then subtracts the fitted trend from each ROI to yield the trabecular pattern. Jiang then performs a number of calculations in order to determine bone texture characteristics and bone structure. Nowhere does Jiang teach or suggest using a combination of parameters to derive quantitative information from a generated data structure representing the trabecular pattern as required by amended claim 12. Therefore, amended claim 12 is allowable over Jiang. Moreover, claims 89-91, 93-98-103, 118-119, 124-130 and 173, which depend from amended claim 12 and are allowable over Jiang for at least the same reasons.

## 35 U.S.C. §103

The office action rejects claims 103, 118 and 119 under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Number 6,108,635 (Herren et al., hereinafter "Herren") in view of Jiang.

Claims 103, 118 and 119 depend from claim 12, which, as discussed above, has been amended to further require *combining at least two parameters from the group consisting of total area, trabecular perimeter, node count (N), segment count (S), node-to-free-end segment count (NF), and mean distance transform values for each connected skeleton.* As also discussed above, Jiang does not disclose this limitation. Likewise, Herren does not include this limitation. Further, the Examiner does not take the position that Herren discloses the other elements of claim 12. Thus, Herren in combination with Jiang does not teach or disclose claim 12 standing alone, and cannot, therefore, teach or suggest the claims dependent from claim 12.

Furthermore, claims 103, 118 and 119 include several additional limitations, including converting a two-dimensional pattern to a three-dimensional pattern, and comparing data to databases and subsets of databases, respectively. Herren, however, does not teach such methods. Instead, Herren discloses a computer-based system for disease information input, analysis and output. In particular, a system to support, speed and improve the major stages in the development of new medical interventions for biological systems is disclosed. The system is coupled to various types of data sources and supports a data driven exploration of the relationships between data in the various data sources. That is, data or information is supplied by the system and the user defines parameters to be altered and the system projects how the defined alterations would impact the data. Nowhere does Herren teach or suggest extracting a trabecular pattern from the region of interest and then generating a data structure representing the trabecular pattern as required by claims 103, 118 and 119.

Accordingly, Jiang and Herren fail to teach or suggest, alone or in combination, all of the limitations of claims 103, 108, and 119. Therefore, claims 103, 108, and 119 are allowable over the combination of Jiang and Herren.

The office action rejects claims 116-117 and 120-123 under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Number 6,306,822 (Kumagai et al., hereinafter "Kumagai") in view of Jiang.

Claims 116-117 and 120-123 depend from claim 12, but include the additional limitations of administering an agent, and comparing quantitative data to image data taken at different times. Kumagai, however, does not teach such methods. Instead, Kumagai teaches a phosphopeptide and a method of treating bone disease using the phosphopeptide. Nowhere does Kumagai teach or suggest extracting a trabecular pattern from the region of interest and then generating a data structure representing the trabecular pattern as required by claims 116-117 and 120-123.

As dependent claims of claim 12, claims 116-117 and 120-123 include the limitations of independent claim 12. Therefore, claims 116-117 and 120-123 are allowable over Jiang for at least the reasons discussed above with regard to claim 12.

Accordingly, Jiang and Kumagai fail to teach or suggest, alone or in combination, all of the limitations of claims 116-117 and 120-123, and the claims are allowable over the combination of Jiang and Kumagai.

The office action rejects claims 13, 92 and 104-105 under 35 U.S.C. 103(a) as being unpatentable over Jiang.

As dependent claims of claim 12, claims 13, 92 and 104-105 include the limitations of independent claim 12. Therefore, claims 13, 92 and 104-105 are allowable over Jiang for at least the reasons discussed above with regard to claim 12. As discussed above, Jiang at a minimum fails to teach or suggest using a combination of parameters to derive quantitative information from a generated data structure representing the trabecular pattern as required by claims 13, 92 and 104-105. Therefore, Jiang fails to teach or suggest all of the limitations of claims 13, 92 and 104-105.

The Applicants disagree with the Examiner's conclusion that these claims would have been obvious, but the rejections are obviated in light of the amendments to the claims.

Accordingly, claims 13, 92 and 104-105 are allowable over Jiang.

## CONCLUSION

Applicants submit that the application is now in order for allowance and Applicants respectfully request that a notice of allowance be issued. Applicants believe that a three month extension of time is required and request that the associated fee be charge to deposit account number 19-4972. Applicants also request that any additional fees required by this paper be charged to or any overpayments be credited to deposit account number 19-4972. Applicant also request that the examiner contact applicant's attorney, if it will assist in processing this application through issuance.

DATE: March 1, 2010

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